

burned down yet again. In 2012/13 they had to contend with yet another dry season, and for the past three years they have been receiving around half of their normal annual rainfall of 360mm – spread unevenly.

But despite the drought, Piet persevered. In 2014 he attended a farmers' day at Kalkfeld where he witnessed how farmers were able to utilise mainly black thorn and rosyntjebos by chopping it with a hammer mill. For some farmers this has been a common practice since the 1990s, but the final product contained a large percentage of wood; the nutritional value was relatively low and production was a cumbersome process.

Enter the 'Boskos' machine

In 2015 he heard of Piet Simpson who designed and built a 'Boskos' machine in the Dwaalboom district. He was convinced that his machine would meet his needs. He went to view the invention and bought what was probably one of the first Boskos machines.

"The machine is built on a chassis with four wheels so that it could be towed with truck or tractor to the spot on your farm where you want to make livestock fodder from shrubs. A mobile generator drives the system. It uses approximately two litres of fuel per hour, and around 400kg of shrub fodder can be produced in this time.

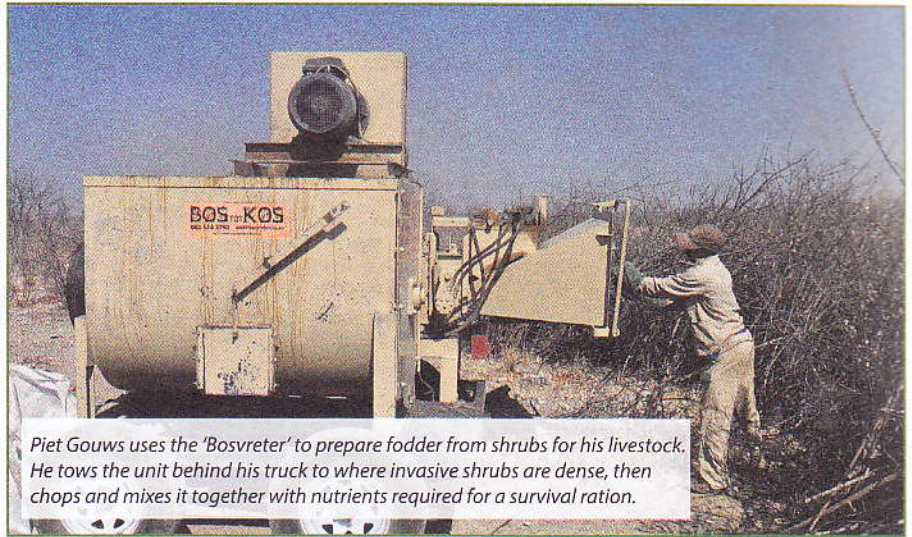
"I tow the unit and generator to spots on the farm where the Ghabba bush grows thickest. The shrubs are felled with a self-propelled saw, piled up and fed through the machine with as many leaves remaining as possible. Even when most leaves have dropped, the thinner branches of the shrub are still succulent. If it is completely dry, the nutritional value of the shrub component of the ration is lower and the recipe must be adjusted, making it more expensive.

"Firstly the shrubs are shredded by a shredding unit, followed by a hammer mill. The chopped product ends up in the mixing drum, where 20ℓ of diluted molasses (20ℓ of molasses on 80ℓ of water), 7kg urea and 50kg of an energy and protein lick are mixed with approximately 330kg of the chopped shrubs. The fodder is emptied into bags and immediately fed to the animals.

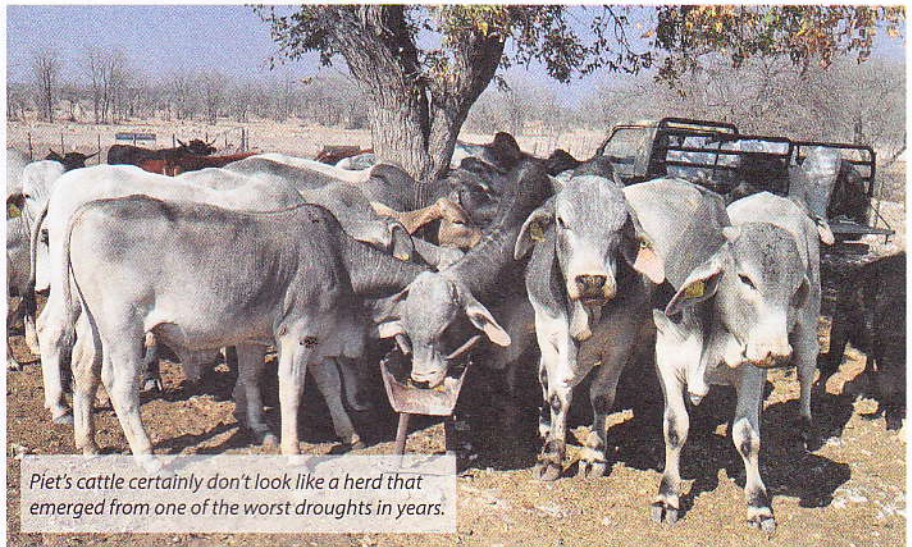
Major savings

"Nutritionists recommended that I do not use more than 60% of the chopped shrubs in the fodder mixture. However, I had to consider the economy of feeding and because I only use it for survival, I rather add 80% of the chopped shrubs," says Piet.

The machine cost R425 000 and,



Piet Gouws uses the 'Bosvreter' to prepare fodder from shrubs for his livestock. He tows the unit behind his truck to where invasive shrubs are dense, then chops and mixes it together with nutrients required for a survival ration.



Piet's cattle certainly don't look like a herd that emerged from one of the worst droughts in years.

taking all costs into account, including supplements, fuel and additional labour, the mixed ration costs a maximum of R1,64/kg or R1 640/t. During the same period, the cost of cut veld grass was R3 000/t.

Each animal receives an average of 3kg of the shrub fodder mixture in troughs at water holes. There must be sufficient troughs with sufficient feeding space in between to eliminate competition.

Despite the little rain and hardly any available grazing, the shrub fodder ensured that 80% of his cow herd conceived and that the weaning weight of their weaner calves remained between 220 and 230kg. The chopped shrub maintained the animals' production and mature weight of the cows.

Hidden benefits

Piet says the system has several hidden benefits. He was able to manage the marketing of his livestock as he could avoid

emergency marketing at a time when numerous farmers were forced to reduce livestock numbers. Because the animals are fed and inspected daily, it makes it easier to monitor diseases, predator activities and crime.

"The effect of the system on shrub control will only be clear in normal rainfall years. In any event, I plan to continue producing shrub fodder, even in normal rainfall years – younger branches should be able to provide even better quality fodder.

"The next step will be to pellet or ensile the fodder so I can build a fodder bank for tough years. Shrubs form an integral part of this resource and should be incorporated successfully into the feeding programme of animals," Piet says.

For more information, contact Piet Gouws on 081 280 0406 or nimmerrus@gmail.com. 

Chopped shrubs save

a persevering farmer

By Andries Gouw

Farms in the north-western parts of Namibia have been subjected to what can best be described as the proverbial lean years for some time now. In certain areas it is difficult to distinguish between gravel roads and grazing on the other side of the fence.

Despite this huge challenge, the region's farmers have not once stopped making plans and Piet Gouws is one of them. In fact, ever since he set foot on the farms Nimmerrus and Uitkoms, northwest of Outjo, he has only ever experienced tough years.

With virtually no grass on the farms, his cows calved as they would in normal years and the weaner calves' condition was not much weaker than during years with normal rainfall. This is thanks to fodder produced from invasive alien plants (IAPs).

Large-scale encroachment

Bush encroachment is a common problem in this arid country and is generally seen as one of the major challenges of sustainable livestock farming. He doesn't experience problems with ordinary IAPs such as 'swartbos' (black bush), bluethorn and sicklebush, but Ghabba bush, which is in fact an edible shrub, has invaded his grazing in certain areas.

Over the past year, his cattle and sheep herd were almost exclusively fed chopped Ghabba bush with a supplement during the drought. The chopped shrub fodder ration was more cost-effective than grass cut from the veld.

Piet and his wife, Mariana, farm on approximately 10 000ha (7 000ha own land) in the so-called 'Vaal block' south of Etosha. Here they run a Simbra cattle herd and a Van Rooy sheep flock. Their son, Pieter, and daughter, Kara, operate a Brahman and Dexter stud respectively, which are cared for by Piet.

Serious setbacks

He started farming in 1990, but did not stock his farm with livestock for the first year, since there was no grazing. In 1991, just after he stocked the farm, it burnt down



The chopped shrubs after having been processed by a shredder, hammer mill and mixer.



Chopped invasive alien plants mixed with supplements, carried Piet Gouws's cattle through the drought without a significant effect on production or performance.

and he had to reduce his livestock by half. From 1992 to 1994 they did not receive rain, and he had to rent land to sustain his core herd.

By 1995, after some relatively good rains, army worms struck and devoured the young grazing within two weeks.

Again he had to rent land, this time in the west next to Damaraland. These disasters were followed by a few good years and with Etosha on their doorstep, they also ventured into tourism.

But disaster was not yet finished with them. In 2012, two-thirds of the farm